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AGILITY: THE CORNERSTONE OF TACTICAL AND OPERATIONAL  
SUCCESS IN AIRLAND BATTLE (U) ARMY COMMAND AND GENERAL  
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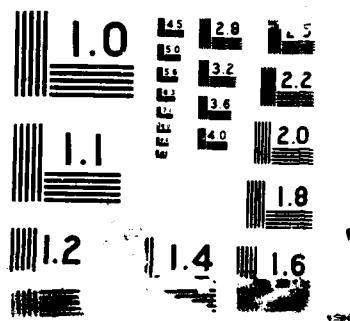
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AGILITY : THE CORNERSTONE OF TACTICAL  
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A Thesis presented to the faculty of the U.S. Army  
Command and General Staff College in partial  
fulfillment of the requirements for the  
degree

MASTER OF MILITARY ART AND SCIENCE

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by

JOHN DUANE ROSENBERGER, MAJ, USA  
B.S., Tulane University, 1975

Fort Leavenworth, Kansas  
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This study is a comparative analysis aimed at determining whether or not the U.S. Army's heavy corps and armor/mechanized infantry divisions actually possess the superior agility necessary to transform the doctrinal tenet of AirLand Battle into a battlefield capability, and use it as a means of defeating a much larger Soviet opponent.

Among the many conclusions which could be drawn from this research are : agility has meaning only in a relative sense--relative to one's opponent, in this case a Soviet opponent; equivalent agility provides no advantage, superior agility must be achieved; the agility of a unit can be measured; a U.S. heavy corps and its major subordinate combat unit, the armor or mechanized infantry division, are not as agile as their Soviet counterparts; and the ability to apply agility as a mechanism for defeating a Soviet attack absolutely depends on the acquisition of near-perfect, real-time information about enemy and terrain conditions, a capability which the U.S. Army cannot claim.

The study concludes there is a serious incongruity between the tenet of agility expressed in AirLand Battle doctrine and the current capability of the U.S. Army's ground maneuver units to apply it. To make matters worse, agility has yet to become a principal criterion in the development of U.S. Army individual and collective performance-oriented training, force design, and materiel. Fundamental deficiencies are highlighted, then followed with recommendations which could eliminate or alleviate their effects.

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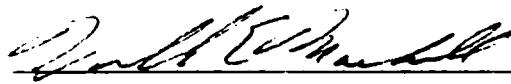
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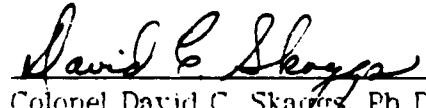
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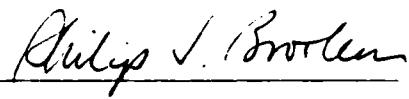
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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency.  
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## ABSTRACT

AGILITY : THE CORNERSTONE OF TACTICAL AND OPERATIONAL SUCCESS IN AIRLAND BATTLE, by Major John D. Rosenberger, USA, 82 pages.

This study is a comparative analysis aimed at determining whether or not the U.S. Army's heavy corps and armor/mechanized infantry divisions actually possess the superior agility necessary to transform the doctrinal tenet of AirLand Battle into a battlefield capability, and use it as a means of defeating a much larger Soviet opponent.

Among the many conclusions which could be drawn from this research are : agility has meaning only in a relative sense--relative to one's opponent, in this case a Soviet opponent; equivalent agility provides no advantage, superior agility must be achieved; the agility of a unit can be measured; a U.S. heavy corps and its major subordinate combat unit, the armor or mechanized infantry division, are not as agile as their Soviet counterparts; and the ability to apply agility as a mechanism for defeating a Soviet attack absolutely depends on the acquisition of near-perfect, real-time information about enemy and terrain conditions, a capability which the U.S. Army cannot claim.

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## CHAPTER 1

### Introduction

Webster's dictionary defines agility as "the quality or state of being agile : a : quickness and dexterity of movement : b : quickness and resourcefulness of mind. Agile suggests ease in quick motion along with smooth coordination and dexterous performance of sudden or difficult action. Applied to mental or intellectual matters, it suggests ready adaptability and ability to change and adjust."<sup>1</sup>

Six years ago, in August 1982, Field Manual 100-5, Operations, the U.S. Army's keystone warfighting manual, introduced *agility* as a fundamental characteristic which U.S. Army leaders and units required to achieve victory in future conflicts. Together with three other tenets--initiative, depth, and synchronization--it became an indispensable commodity for tactical and operational success. The revision of this manual, published two years ago in May 1986, reiterated the vital importance of being agile in the planning and execution of campaigns, major operations, battles, and engagements.

As a fundamental tenet of the U.S. Army's warfighting doctrine, agility along with its three companions, was intended to serve as an

authoritative criterion for future force design, materiel acquisition, as well as individual and collective training.<sup>2</sup> Yet, six years later, the quest for agility has largely been ignored. Moreover, several different interpretations of agility permeate subordinate doctrinal literature. By all indications, agility may have become just another "buzzword" in the U.S. Army's lexicon. This should be a matter of serious concern, because agility, as this thesis elucidates, will be key to the U.S. Army's tactical and operational success in future conflicts, particularly against a Soviet foe. Without a common understanding of agility and the tenacious pursuit of it by leaders and units while preparing for war, the U.S. Army cannot hope to see this vital principle applied in combat.

If the U.S. Army is going to stake its combat success on being more agile than its opponent, it would be interesting, perhaps reassuring, to know whether or not U.S. Army leaders and units actually possess the mental and physical agility necessary to defeat its most likely opponents in mid- or high-intensity conflicts. For instance, does a U.S. heavy corps or armored/mechanized infantry division, actually possess the capability to adapt and react faster to change than their Soviet counterparts? Are they, in fact, more agile? Moreover, are they agile enough? The purpose of this study was to answer these fundamental questions.

Along the way other research questions, central to the thesis, became important to address. For instance, why was agility introduced as a basic tenet of AirLand Battle? Who proposed the idea? Were there important implications underlying the concept of its application on the battlefield? Was agility simply a characteristic desired in leaders and units, or was it a mechanism to defeat a numerically superior foe? Could agility be quantified and measured? Why was superior agility required to achieve tactical and operational success against the Soviet Army in Central Europe?

In the process of answering these questions, an underlying goal of this study was to add to a very limited body of scholarship related to the topic, and foster a widespread appreciation for the decisive 'edge' it can provide a force, particularly if it must fight outnumbered and win.

### **Methodology**

To answer these research questions, a combination of descriptive, comparative, and historical methods was used. Books, periodicals, reports, and lectures were the principal sources of information.

Where did the research actually lead? As described in Chapter 2, it led first to determining the original rationale for introducing agility

into U.S. Army warfighting doctrine. During this phase of research, several important implications and incongruities in FM 100-5 were revealed, particularly regarding the ways and means which were fundamental to securing or retaining the initiative in combat and exercising it aggressively to accomplish assigned missions, the dominant theme of AirLand Battle doctrine. Combat power, maneuver, and agility all seemed to compete for the dominant role. Some interesting nuances and relationships also emerged from this critical assessment of the doctrine, particularly between the ideas of initiative, combat power, maneuver, and agility which do not stand out otherwise.

These findings strongly suggested the definition of agility in FM 100-5, "the ability of friendly forces to act faster than the enemy" was a rather nebulous representation of the original idea. All things considered, a more doctrinally consistent definition of agility would be "the ability to reorient, maneuver, and concentrate superior combat power faster than the enemy." Exercising an author's prerogative, this definition was used throughout the remainder of the study.

Incidentally, some disconcerting aspects about the idea of using agility as a mechanism for defeating a larger opponent also emerged. For example, the evidence suggested that defeating a large-scale Soviet

attack was based on an assumption that Soviet units were not as agile as American units. Second, the concept of applying agility assumed that Soviet commanders would respond at the tactical level to the actual or threatened destruction of committed forces, and when they did, they would do it slowly and in a piecemeal fashion. These implicit assumptions had to be investigated.

One of the most important observations occurred during this phase of the research. Agility was a relative term. It had meaning and importance only in relation to the enemy's agility, much like two boxers in a ring. From this key observation, the study proceeded to determine whether a U.S. heavy corps, such as the U.S. Army's III Corps, actually possessed the capability to reorient, move, and concentrate superior combat power faster than its Soviet counterpart in Europe, a tank or combined-arms army.

However, a difficult obstacle lay astride this path. To compare these two units, or any others for that matter, some means of quantifying and measuring agility had to be devised. This was not as difficult as first imagined. If the definition of agility could be more accurately described as "the ability to reorient, maneuver, and concentrate superior combat power faster than the enemy," then quantifying agility was

possible by determining the time it took for each unit to complete the process. Hence, the unit which demonstrated the potential capability to complete the process faster than its opponent would, by definition, be more agile.

Using this method to measure agility, the study proceeded to determine the amount of time required for a U.S. corps commander, upon receipt of orders, to move his entire corps a distance of 100 kilometers. Likewise, the study next examined the amount of time required for a Soviet army commander, upon receipt of orders, to move his force 100 kilometers under the same conditions. Whether the movement preceded an attack, a defense, or a withdrawal at this stage was irrelavent. The important thing for the reader to remember was *the order to change direction and orientation came unexpectedly, and was not anticipated or supported by a thoroughly planned branch or sequel to the existing plan* (contingency plans).

The total time measured in the model was divided into two blocks: the time consumed by each unit from receipt of orders until the time the first company crossed the line of departure, and the time consumed in the physical movement of the unit. The time between receipt of orders and crossing the line of departure included the time used by staffs at each

echelon of command to develop and decide on a course of action, plan and coordinate, plus prepare and issue orders to subordinate units. The pass time considered for each unit included its usual attachments and service support units.

Chapter 4 constituted the analysis of the facts and evidence which emerged during the course of research. In brief, subjective analysis of the research indicated the effective application of agility hinged on several important factors, which could be viewed, without much difficulty, as prerequisites for success. But most importantly, it became clear that the original authors of FM 100-5 intended that agility be used as a *mechanism* for defeating a larger, numerically superior opponent.

Chapter 5 contains the most significant conclusions which emerged from this study, to include recommendations for eliminating or alleviating deficiencies which preclude the U.S. Army from achieving the agility it believes necessary to win in the conditions of future conflicts.

#### **Limitations**

As a caution to the reader, all the facts and evidence presented in this study were derived from unclassified sources. In addition, due to time and financial constraints, the majority of information was obtained

from sources immediately available in the library of the U.S. Army Command and General Staff College or the School of Advanced Military Studies, Fort Leavenworth, Kansas, and other literature shared by the faculty in the Center for Army Tactics.

One other limitation deserves mention. Information or studies of this topic could not be found prior to 1980. This was quite understandable. The concept of agility was not introduced into U.S. Army doctrine until 1982. Hence, this study broke some new ground, but undoubtedly leaves plenty of room for further investigation of the subject.

All references to U.S. organizations were obtained from the most current U.S. Army tables of organizations and equipment listed in Student Text 100-3, published by the U.S. Army Command and General Staff College. References to composition of Soviet doctrine and organizations were obtained from U.S. Army Field Manual, 100-2-1, The Soviet Army : Operations and Tactics and Field Manual, 100-2-3, The Soviet Army : Troops, Organizations, and Equipment.

And last, this study focused entirely on the agility of the U.S. Army's dominant land combat forces, the heavy corps and its subordinate maneuver units, the armor and mechanized infantry heavy division. The study did not consider the U.S. Army's motorized division,

light infantry division, airborne division, air assault division, the separate heavy brigade, or the armored cavalry regiment (other than refer to it as a suitable model for force structure changes).

## ENDNOTES

1. Webster's Third New International Dictionary (1976) : 42.
2. U.S. Army, Field Manual 100-5--Operations (1986) : 1.

## CHAPTER 2

### REVIEW OF LITERATURE

#### **The Origin of Agility in AirLand Battle Doctrine**

During the late 1970s, a groundswell of dissent had formed within the rank and file of the U.S. Army. At issue was the 1978 version of Field Manual 100-5--Operations, the Army's basic warfighting doctrine, generally known by its sobriquet--the 'active defense.' The brainchild of General William E. DePuy, then commander of U.S. Army Training and Doctrine Command (TRADOC), the manual sparked controversy the day it was published. The Army, as a whole, doubted the legitimacy of its approach to fighting and winning wars, given the expected conditions of current and future battlefields.

Basically, the Army's senior leadership never reached a consensus, something essential if an army hopes to imbue its troops with new warfighting concepts and methods. In particular, the doctrine was not embraced as a credible and feasible way to defeat a conventional attack of Warsaw Pact forces in Central Europe.

Strong arguments contesting the doctrine stemmed from four perceptions. First, the active defense did not address the ongoing change

in Soviet offensive doctrine, from a classic breakthrough attack of succeeding echelons, to an attack on multiple axes designed to throw the defender off balance and exploit any weakness discovered in the process. Second, the manual concentrated on battles and engagements at division-level and below, ignoring the operational level of war. Third, the doctrine emphasized firepower and attrition as the means to achieve victory, neglecting the use of maneuver. And last, the doctrine rested on a foundation of statistical analysis, ignoring the enduring historical principles of war. In short, General DePuy, and others in his following, failed to recognize that an army's doctrine is inseparable from its past.<sup>1</sup>

General Donn A. Starry was acutely aware of these sentiments when he assumed command of U.S. Army Training and Doctrine Command from General DePuy in 1978. He assumed command determined to refashion concepts for future warfare. While his team continued the herculean task of reorganizing the Army along the lines of Division and Corps '86 models, begun earlier by General DePuy, another group of accomplished strategists and tacticians molded a new doctrine for the Army, a doctrine designed to satisfy warfighting requirements into the 21st century.

In early 1980, Lieutenant Colonel Huba Wass de Czege, Lieutenant Colonel L. D. Holder, and several other officers serving in the Department of Tactics, U.S. Army Command and General Staff College, were tasked to revise the 1978 version of Field Manual 100-5. In developing a fresh approach to warfighting, the authors drew heavily from historical lessons and theory of history's most respected military teachers: Sun Tzu, Clausewitz, Fuller, Liddell Hart, Milesche, and Willoughby. They also examined and analyzed the operations of America's finest tactical and operational commanders, specifically Sherman, Jackson, Lee, Patton, MacArthur, and Clarke.<sup>2</sup>

By the end of 1980, the fundamental concepts of the doctrine had jelled. The authors believed the essence of the doctrine could be distilled into four essential characteristics: initiative, depth, violence, and integration.<sup>3</sup> As the year came to a close, the authors completed their first draft of a new FM 100-5 and circulated the document for review and comment within the TRADOC community. They called it AirLand Battle doctrine.

When the manuscript reached General Starry, he rejected violence and integration as fundamental tenets of the doctrine. He much preferred the concept of *synchronization*, a characteristic suggested by his predecessor, General DePuy. About the same time, Lieutenant General

William R. Richardson, then Deputy Commanding General of TRADOC, suggested to General Starry that *agility* was an essential characteristic which leaders and units required to fight and win in future conflicts, particularly against the forces of the Warsaw Pact. To support his belief, he cited several instances in history where a smaller force was able to defeat a numerically superior enemy simply because it was more agile, both mentally and physically. General Starry agreed completely, thus agility became the fourth basic tenet of AirLand Battle doctrine.<sup>4</sup>

General Richardson publicly introduced agility as a fundamental requirement of leaders and units in an article published in Army Magazine, June 1981. In this landmark article, he emphasized the absolute importance of possessing the initiative in combat; the precondition for tactical and operational success. Then, he linked the process of securing the initiative directly to agility, which he envisioned as the ability to think and act faster than the enemy. He wrote:

"...the initiative is gained by presenting the enemy with repeated, continuous, disrupting, and menacing actions more rapidly than he can analyze their impact and react to them. To do this, our commanders at every level must continuously analyze the immediate situation, make correct decisions and translate them into action more rapidly than their opponents. If we consider this as a closed loop process (analyze-decide-act-analyze again), then the objective here can be described as thinking and acting faster than the enemy."<sup>5</sup>

This operational concept of winning engagements, battles, and campaigns by virtue of being more agile than an opponent, was subsequently included in the final draft of FM 100-5, published on 20 August, 1982. Agility, now one of four basic tenets of AirLand Battle doctrine, was described as follows :

Agility requires flexible organizations and quick-minded, flexible leaders who can act faster than the enemy. They must know of critical events as they occur and act to avoid enemy strengths and attack enemy vulnerabilities. This must be done repeatedly, so that every time the enemy begins to counter one action, another immediately upsets his plan. This will lead to ineffective, uncoordinated, and piecemeal enemy responses and eventually to his defeat.<sup>6</sup>

Shortly after publication of the 1982 edition of FM 100-5, two of the original authors collaborated and penned a brief synopsis of the new doctrine in Military Review. Regarding agility, the authors expanded their original concept stating, "Commanders...must develop the mental and operational agility necessary to shift forces and fires to the point of enemy weakness more rapidly than he can respond."<sup>7</sup>

In June 1985, the Center for Army Tactics, Command and General Staff College, published U.S. Army Field Circular 100-15-1, Corps Deep Operations. The authors of this manual defined agility in different terms. They stated:

Agility is the ability to swiftly shift the point of concentration of combat power, to change from one type of operation to another, or to preempt a new, developing, or predicted threat. Agility is relative. On one hand, the corps becomes more agile through predictive staff work in all functional areas, a rapid decision process, responsive subordinate units and smooth functioning movement procedures. On the other hand, the enemy is made less agile through deception, command and control countermeasures, and by attacking the enemy units with fire and maneuver or fires alone to disrupt their movement.<sup>8</sup>

In May 1988, the U.S. Army published a substantial revision of the 1982 edition of FM 100-5. For the most part, it was simply a refinement of certain concepts. In particular, the concept of agility was amended. Not only was it re-defined, it was linked to a process; a means which a smaller force could use to defeat a numerically superior foe.

Agility--the ability of friendly forces to act faster than the enemy--is the first prerequisite for seizing and holding the initiative. Such greater quickness permits the rapid concentration of friendly strength against enemy vulnerabilities. This must be done repeatedly so that by the time the enemy reacts to one action, another has already taken its place, disrupting plans and leading to late uncoordinated, and piecemeal enemy responses. It is this process of successive concentration against locally weaker or unprepared enemy forces which enables smaller forces to disorient, fragment, and eventually defeat much larger opposing formations.

To achieve this, both leaders and units must be agile.<sup>9</sup>

Since publication of the 1988 edition of FM 100-5, the most vocal proponent for agile leaders and units has been Major General Frederick M. Franks, Jr., former Deputy Commandant of the U.S. Army Command

and General Staff College. In his words, "Agility is the ability of a force to act faster than the enemy with the goal of repeated concentration of friendly strength against enemy weaknesss. The effect of agility is to set the tempo of battle by presenting the enemy commander more tactical problems than he can handle."<sup>10</sup>

In a lecture presented at the U.S. Army Armor Conference in May 1986, he fervently stated:

The principle underlying doctrinal philosophy of Airland Battle is securing and retaining the initiative and exercising it aggressively. It is an expression of the preferred American way of war and is a fundamental principle that has long characterized the idea of warfighting in our Army. Throw the enemy off balance by a powerful blow from an unexpected direction and keep doing that until the enemy is defeated. Such an underlying doctrinal philosophy connotes agility and initiative. We cannot be successful unless we fight that way and we cannot fight that way unless our leaders, soldiers, and units possess and exercise *agility* and seek, even in defense, to wrench initiative from the enemy.<sup>11</sup>

Since publication of the 1986 version of FM 100-5, there has been a growing interest in the topic of tactical and operational agility. Major Brian A. Lovatt, a former student in the U.S. Army School of Advanced Military Studies, Ft. Leavenworth, Kansas, conducted a study of tactical agility in the latter months of 1986. His monograph titled "An Appreciation of Tactical Agility as a Function of the Decision-Making Process,"

was the first scholarly attempt to understand the tempo of decision-making necessary to achieve tactical agility in a stochastic battlefield environment. He believed that agility was vital to achieving mass and applying superior combat power against the enemy. His conclusions became influential as this study proceeded.<sup>12</sup>

### **Assessment of the Doctrine**

As research continued, the definition of agility and the description of its use, became quite intriguing. Buried in the idea was a mechanism of winning engagements and battles, despite being outnumbered, plus several implications which deserved careful perusal.

First, the idea that agility permits successive concentration of friendly strength against enemy weakness, resulting in the defeat of "large enemy formations," obviously suggested that agility was an advantage required to defeat a conventional, echeloned attack of Soviet forces, principally in Central Europe. This theme was consistent with the U.S. Army's first official description of the operational concept for AirLand Battle doctrine, published under General Starry's signature in March 1981. The pamphlet stated:

This concept [AirLand Battle] primarily deals with war in areas of the world where there are large numbers of relatively

modern, well-equipped forces who use Soviet style operational concepts and tactics. Quite naturally, therefore, the threat against which the concept is designed is typified by the Warsaw Pact in Central Europe, the larger aggregations of mechanized forces in the Middle East, or the threat from North Korea.<sup>13</sup>

General Richardson, also alluded to this theme. He said, "The unifying tactical concept [of AirLand Battle] is focused squarely on the mission of defeating numerically superior enemy forces anywhere in the world."<sup>14</sup>

Second, the phrase "seizing and holding the initiative," instead of "retaining the initiative," implied that agility was considered useful primarily in the context of defensive operations. This did not mean that agility served little purpose in offensive operations. The idea was simply consistent with the defensive mindset of the U.S. Army in Central Europe for the past 43 years. Indeed, strategic defense has been fundamental to the United States' geo-political concept of military operations since the end of World War II.

Third, the idea of successively concentrating friendly strength against locally weaker or unprepared enemy forces and the phrase "disrupting his plans and leading to late, uncoordinated, and piecemeal enemy responses" described a form of defense which achieved victory primarily through offensive action, a series of proactive counterattacks

designed to frustrate and unravel the attacker's plan. Indeed, these phrases described a battlefield that had been carefully structured to ensure defeat of the enemy through offensive action. And finally, the phrases "larger opposing formations" and "formations at every level," implied that the effects of superior agility were realized primarily by the movement and concentration of ground maneuver units.

These implications, extant in the description of agility, represented a striking contrast to the U.S. Army's traditional approach to fighting, a tradition in which overwhelming numbers of men, equipment, firepower, and logistical support were the instruments used by the U.S. Army to secure victory in previous wars. Evidently, the authors concluded future tactical and operational methods of fighting had to provide for a *quick* resolution of conflict under circumstances permitting U.S. political authorities to negotiate with adversaries from a position of strength, without resorting to nuclear weapons. According to General Starry, AirLand Battle doctrine was fundamentally designed to preempt the possibility of prolonged military operations.<sup>15</sup> In sum, the introduction of agility, as a basic tenet of its warfighting doctrine, signalled the U.S. Army expected to fight outnumbered in the future, and had to depend on other means to win its battles and win them quickly.

Major Lovatt echoed this opinion concluding the conditions anticipated in future conflicts for the most part were outside the U.S. Army's historical experience. The austerity of resources, the expected tempo of combat operations, and the unacceptable cost of attrition required friendly forces to act more quickly than the enemy in order to achieve a relative combat power advantage over him.<sup>16</sup>

### **Incongruities in AirLand Battle Doctrine**

While conducting this critical assessment of the doctrine, several incongruities also became apparent. Agility was not the only doctrinal element considered to be a prerequisite for seizing and holding the initiative; superior combat power and maneuver also shared the spotlight.

To begin with, the authors of AirLand Battle doctrine stated that agility "is the first prerequisite for seizing and holding the initiative." However, other fundamental concepts of the doctrine carried the same connotation. For instance, FM 100-5 also asserted that *superior combat power*, applied with precision at the right time and place, secured the tactical or operational initiative in combat.<sup>17</sup> Then, on the following page, the manual stated that *maneuver* was "the dynamic element of combat--the means of concentrating forces at the critical point to achieve

surprise, psychological shock, physical momentum, and moral dominance which enable smaller forces to defeat larger ones.<sup>18</sup> Which was it? Some linkage between agility and initiative had to be found.

### **Initiative, Combat Power, Maneuver, and Agility**

In the military profession, a maxim has long been accepted--the force which possesses the initiative, the power to dictate the terms and outcome of battle, has the advantage in combat and usually prevails over its opponent. In fact, AirLand Battle doctrine was based on securing or retaining the initiative and exercising it aggressively to accomplish the mission.<sup>19</sup> Hand in hand with this idea, the doctrine also espoused the warrior's axiom that offense is the decisive form of war, the commander's ultimate means of imposing his will on the enemy.<sup>20</sup>

Although the exercise of initiative was embraced as its fundamental premise, the doctrine also contended that *superior combat power*, concentrated unexpectedly against enemy weakness at a specific time and place, would decide the outcome of campaigns, major operations, battles, and engagements.<sup>21</sup> In other words, it was the effect of superior combat power, not agility, which delivered the initiative.

In FM-100-5, combat power was described as the ability to fight, created by the artful blend and application of four elements : maneuver, firepower, protection, and leadership.<sup>21</sup> Colonel Huba Wass De Czege, an original author of what became the the 1982 edition of FM 100-5, described his concept of combat power during his service as Director, School of Advanced Military Studies, U.S. Army Command and General Staff College. He wrote:

Combat power is always relative, never an absolute, and has meaning only as it compares to that of the enemy. Combat power is defined as that property of combat action which influences the outcome of battle. It has meaning only in a relative sense--relative to that of the enemy--and has meaning only at the time and place where battle outcomes are determined. Prior to battle there exists only the capability. Leaders and forces of their environment, to include the actions of the enemy, transform this capability into combat power. Superior combat power has been generated on the battlefield by superior leaders and superior units against forces vastly superior by any objective criteria.<sup>22</sup>

General Franks contended that combat power had at least three characteristics; it was situational, relative, and reversible. He said:

Combat power is not derived by mathematical formula into which numbers of men, amounts of equipment, or quality of equipment on either side of the battleline, are injected with the product being a prediction of victory. We know for example that a small unit under certain situational conditions achieving surprise, and achieving positional advantage can certainly achieve relative success over a much larger force. We also know that once you get the attention of the large force, combat power is easily reversible. The smaller force can quickly have the tables turned on it and the combat power applied in the other direction.<sup>23</sup>

And yet, FM 100-5 also suggested that the *maneuver* of combat forces was ultimately the means of achieving surprise, psychological shock, physical momentum, and moral dominance necessary for smaller forces to defeat larger ones.<sup>24</sup> In other words, maneuver--the tactical movement of forces to secure an advantage--was the actual means of generating and applying superior combat power at the decisive place and time, which in turn, resulted in seizure or retention of the initiative.

General Starry, reinforced this assessment in the introduction he penned for Richard Simpkin's book, Race To The Swift in 1985. In this brief essay, he adamantly stated that the employment of nuclear weapons to secure tactical and operational objectives had become a nonrelentant means of achieving political goals and attrition warfare was no longer a realistic operational concept for U.S. forces. In his mind, there was an urgent need for the U.S. Army to refashion concepts for future warfare.

As he so eloquently stated:

The basic question to be asked and answered is whether or not it is possible to fight and win outnumbered without having to invoke the use of theater nuclear weapons. Here the history of warfare is instructive. For at the operational and tactical levels of warfare the history of battle teaches that time and again the outcome of battle more often than not defies what one might have expected given the force ratios extant at the battle's outset. In other words, within reasonable limits, it matters not whether one outnumbers or is outnumbered by the enemy; the outcome of battle turns on factors other than numbers. For the side which believes

itself foredoomed by the realities of national policy to be ever on the low side of the numbers equation, this is indeed encouraging.... By far the majority of winners in battles in which the beginning force ratios were generally within the "reasonable" limits suggested above, were those who seized the initiative from the enemy, and held it to the battle's end. Most often the initiative was successfully seized and held by *maneuver*.<sup>25</sup>

This statement by General Starry was supported recently by a study of data assembled by the Historical Evaluation and Research Organization. Robert McQuie, an operations research analyst with the firm, examined data from 80 battles between 1941 and 1982. The battles included both unsuccessful attacks and unsuccessful defenses which occurred in World War II and the 1967 and 1973 Arab-Israeli wars. His conclusions were interesting because they refuted conventional military thought.<sup>26</sup>

Contrary to accepted convention, McQuie's study suggested that accumulation of casualties was only occasionally a factor in a commander's decision to break off unsuccessful battles (see Figure 2-1). As he described:

...the principal condition associated with defeat appears to have been the use of maneuver by an enemy, which was present in 64 percent of the cases. It does not seem to have been associated with the intensity of his firepower, which was associated with only 12 percent of the defeats. Where maneuver was the decisive influence, moreover, recognition of defeat appears to have arisen from a look toward the future and an enemy's potential capabilities rather than toward the past and

the casualties he has inflicted... It appears that casualties are not often the reason battles are lost.

### **REASONS FOR A FORCE ABANDONING AN ATTACK OR A DEFENSE**

	Percent
<b>Maneuver by Enemy</b>	
Envelopment, encirclement, penetration	33
Adjacent friendly unit withdrew	13
Enemy occupied key terrain	6
Enemy achieved surprise	8
Enemy reinforced	4
<b>Total</b>	<b>64</b>
<b>Firepower by Enemy</b>	
Casualties or equipment losses	10
Heavy artillery and air attacks	2
<b>Total</b>	<b>12</b>
<b>Other Reasons</b>	
No reserves left	12
Supply shortage	2
Truce or surrender	6
Change in weather	2
Orders to withdraw	2
<b>Total</b>	<b>24</b>

Figure 2-1. The influence of maneuver in battle.<sup>27</sup>

Considered together, these last two findings established a most essential point for the direction taken in this study; an understanding that the concentration and application of superior combat power, achieved through maneuver, comprised the essence of AirLand Battle doctrine. Indeed, maneuver served as the principal means of generating and applying superior combat power, securing and retaining the initiative, exploiting success, preserving freedom of action, and overcoming inferiority in relative combat power. Put another way, an outnumbered force always has a good chance of winning if it can maneuver with superior quickness and dexterity--a superior agility--relative to the enemy.

### Conclusions

The inclusion of agility, as a basic tenet of AirLand Battle doctrine, stemmed from the sober recognition that the U.S. Army would be constrained to strategic defense, outnumbered by its Soviet adversary, and compelled to win with forces immediately available in theater. Accordingly, it had to seek innovative means to accomplish its mission, i.e. being more agile than its opponent.

The evidence also suggested that agility, defined in FM 100-5 as "the ability of friendly forces to act faster than the enemy," was ambig-

uous at best, and a far cry from General Richardson's original idea. In particular, the word "act" used in the description of agility rang hollow. Furthermore, various interpretations of agility have been published in subordinate doctrinal literature; none entirely consistent with the other.

The findings up to this point led to the conclusion that the current definition of agility was inconsistent with AirLand Battle doctrine as a whole. A better definition of agility would be "the ability to reorient, maneuver, and concentrate superior combat power faster than the enemy." Thus, by possessing this ability, an outnumbered defending force had the potential, at least temporarily, to generate a combat power advantage against isolated portions of a larger enemy force somewhere on the battlefield.

In addition, the evidence also revealed that agility, like combat power, had meaning only in a relative sense—relative to one's opponent, in this case a Soviet opponent. On the battlefields envisioned by the authors of AirLand Battle, superior agility, both mental and physical, was a feasible means to achieve a relative combat power advantage over the Soviets. As they saw it, the effects of successive maneuver and the application of superior combat power against Soviet weakness, would disrupt the synchronization of a patterned Soviet attack, lead to the

eventual defeat of the enemy's plan, wrest the initiative from him, and create opportunities to conduct offensive operations, the decisive means of achieving victory.

However, there were some unsettling aspects in this concept of using agility to win engagements and battles. First, defeating a large-scale Soviet attack using superior agility seemed to be based on an assumption that U.S. Army combat units were inherently more agile than their Soviet counterparts. Second, the premise of the idea assumed that Soviet commanders *would* respond to successive concentrations of superior combat power at the tactical level, reorient committed forces or reserves, and when they did, the response would be slow and ineffective. The question then became, could these assumptions be substantiated by empirical evidence? Were U.S. Army combat maneuver units, in fact, capable of applying agility in accordance with the doctrinal concept of agility? Moreover, were they agile enough to implement this doctrine? These questions begged for answers.

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## CHAPTER 3

### DISCUSSION

#### **The Measurement of Agility**

In order to answer the questions posed in the previous chapter, some means of quantifying agility had to be developed. At first, this seemed impossible, but an idea eventually came to mind. If agility, in the context of AirLand Battle doctrine, can more accurately be described as "the ability to reorient, maneuver, and concentrate superior combat power faster than the enemy", then agility could be measured using time as the unit of measure. The reason is quite simple.

When any combat unit receives orders to reorient, move, and concentrate elsewhere on the battlefield, the common tasks required to accomplish the mission, such as developing a course of action, task organizing, planning, preparing orders, issuing orders, and moving subordinate units, take time to complete. Therefore, a unit which can accomplish these common tasks faster than its opponent, by definition, must be more agile than its foe. Using this method to quantify agility, further research aimed to determine if a heavy corps, the largest tactical unit in the U.S. Army, and the centerpiece of AirLand Battle doctrine,

was more agile than its Soviet counterpart, a combined-arms or tank army.

The first phase of this research assessed the amount of time required for a U.S. corps commander, upon receipt of orders, to move his forces to an area of operations 100 kilometers away. Next, the research strived to determine the amount of time required for a Soviet army commander, upon receipt of orders, to move his forces to an area of operations 100 kilometers distant. For purposes of this assessment, the time required to form for battle was not considered. In addition, the order to change direction and orientation came unexpectedly, and was not anticipated or supported by a thoroughly planned branch or sequel to the existing plan (contingency plans).

For both convenience and simplicity, the total time consumed by each unit was divided into two blocks; the time consumed by the unit from receipt of orders until the time its first company or sub-element crossed the line of departure, and the pass time of the unit (see Figure 3-1). The time between receipt of orders and crossing the line of departure included the time to develop and decide on a course of action, complete the plan, then prepare and issue orders to subordinate units. The pass time for each unit included its usual attachments and service support units.

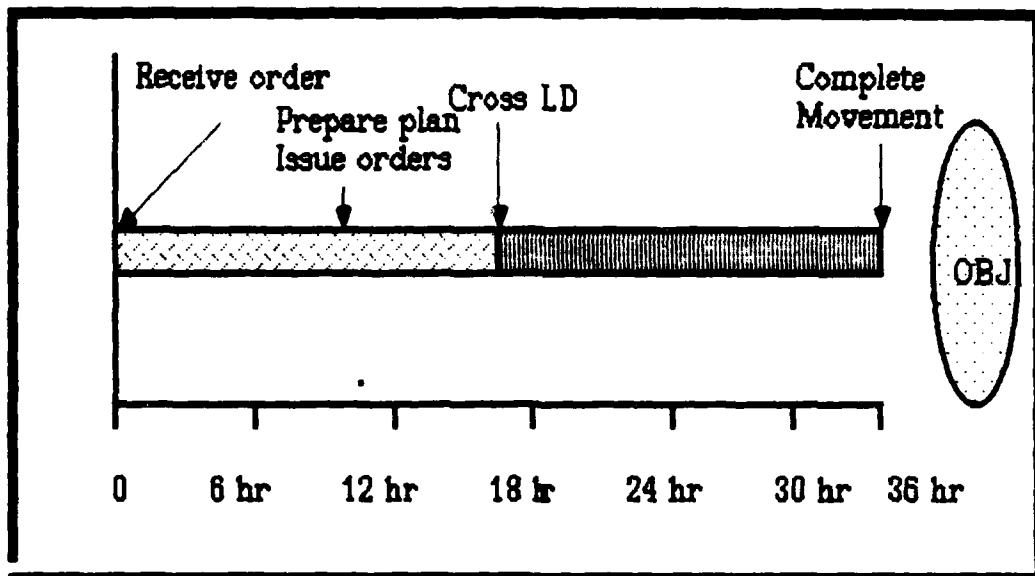


Figure 3-1. The measure of agilit

#### **The Command and Control Process of a U.S. Corps**

The search to determine how much time was normally required for a U.S. corps to decide upon a course of action, complete a plan, prepare and issue orders, and cross its line of departure was disappointing. There were no established time requirements, standards of performance, or guidelines in current doctrinal literature which set limitations or constraints on the time permitted to complete this process within the corps.

The final draft of Field Manual 100-15, Corps Operations, dated 22 February 1985 had no information on the subject. The revised preliminary draft of the same manual, dated November 1987, included a dis-

cussion of agility at the corps level, but offered no insight into the length of the corps' planning process. However, the manual did state the following:

Agility at the corps level is achieved through three means: the capability of corps forces to rapidly respond to change, a responsive command and control system, and mental flexibility of the commander. Any degradation of one of these means will significantly affect the ability of the corps to react to the rapidly changing conditions while conducting AirLand Battle operations. ... The commander must develop the corps' ability to react with speed...Corps must train divisions to be responsive to sudden shifts in direction. More importantly it must train the myriad of support forces to react to and continuously support reorganization of the combat forces.<sup>1</sup>

Later on in the same chapter, the corps' command and control process was described in the following terms :

The command and control process is not a rigid process... The corps commander may be required to conduct the entire command and control decision process from mission receipt to the issuance of an oral order in 1/2 hour, or the process may encompass several months of planning such as a general defense plan.<sup>2</sup>

Interestingly, the only reference to a standard of performance followed at the end of the chapter, and it was ambiguous at best. The manual stated, "Overall up to this point no more than one third of the available planning time should have been used by the corps. This leaves two-thirds of the planning time plus other time required for such things as movement for subordinate units."<sup>3</sup> In short, the question still remains

ed. How much time does it take a U.S. corps upon receipt of orders to move its first company across the line of departure? Apparently, it was anybody's guess.

### **Movement of a U.S. Heavy Corps**

Determining the pass time for a U.S. heavy corps was a simple task, thanks to the yeoman's work done by Major Peter S. Kindsvatter, in his recent monograph, "An Appreciation for Moving the Heavy Corps : The First Step in Learning the Art of Operational Maneuver." Using a notional U.S. XX Corps, composed of three heavy divisions, an armored cavalry regiment, and appropriate corps level support units, Kindsvatter demonstrated the corps could conceivably move 100 kilometers along four routes and concentrate for battle in about 33 1/2 hours.<sup>4</sup>

The corps he considered was notional, but aligned closely with the actual composition of the U.S. III Corps in Fort Hood, Texas. It consisted of 22,412 vehicles. In his computations, the standard rate of march was 20 miles per hour. The standard interval between vehicles in march column was 100 meters. He was quick to acknowledge his calculations represented a "perfect" march without complications, enemy interference, or the friction of war. Consequently, Kindsvatter maintained the effects of

battlefield friction would probably double the time required by the corps to complete its movement. Taking friction into account, he believed a better estimate of a corps' total movement time would be about 50 hours.<sup>5</sup>

Lieutenant General Crosbie E. Saint, current commander of III U.S. Corps, has led a crusade bent on developing the individual and collective skills, methods, and procedures necessary to move a corps at maximum speed. Early in his command, he estimated the pass time of the corps, moving on a single route at a traditional speed of 25 kilometers per hour and 100 meters between vehicles in column, would be approximately 96 hours. In his mind, this would not satisfy the corps' warfighting requirement.

Consequently, General Saint implemented several changes in the corps' standard movement procedures. The new standards required subordinate units to march at a rate of 30 kilometers per hour, maintain 50 meter interval between vehicles, and limit gaps to two minutes between march units and five minutes between march serials. Thus, based on his assumption the corps would obtain and march on a minimum of eight routes during combat, the pass time of the corps could be reduced to 10 1/2 hours, a substantial improvement in maneuver capability.<sup>6</sup>

The implementation of these new march standards produced a considerable decrease in the amount of time required to move and concentrate the corps for battle. Consequently, the corps was able to increase responsiveness to unexpected shifts in orientation during battle. But again, these calculations did not consider the time which will inevitably be lost to the effects of battlefield friction. Hence, 10 1/2 hours may be theoretically possible, and useful as an objective for staff planning purposes, but it is unrealistic to expect. Movement planners, in the event of war in Europe, can never ignore the effects of limited route priority and availability, heavy route congestion, the intermingling of forces, impassable routes, unexpected destruction of bridges, wrong turns, refugee columns, and enemy air interdiction; something foreign to large peacetime maneuver exercises.

Colonel L. D. Holder, an original author of the 1982 version of FM 100-5, and Major Edwin J. Arnold recently completed a provocative article titled "Tactical Movement of the Heavy Division." This article summarized their recent experience as key planning and operations officers in 2d Armored Division, Fort Hood, Texas. Their assertions were both stimulating and enlightening. For example, regarding the current Army of Excellence armor division, they stated, "The basic characteristics of

heavy divisions appear to contradict the speed, agility, and synchronization that AirLand Battle doctrine endorses...when an entire division moves with its usual attachments, it puts some 8000 vehicles on the road.<sup>7</sup> In their estimate, given three or four suitable routes, a heavy division's total pass time would be about five hours. Accordingly, a move of 100 kilometers, under ideal conditions, would take a division about ten hours. This time included the time which had to be taken to refuel the M1 tank fleet. Unlike its M60 predecessor, the M1/M1A1 tank only has an operating capability of approximately 10-12 hours on a full load of fuel, which represents about a two fold-decrease in endurance. The total time also included the time required to move committed brigades to the line of departure. Interestingly, Kindsvatter's research corroborated these estimates.<sup>8</sup>

#### **The Command and Control Process of a Soviet Army**

Unlike a U.S. heavy corps, the time required by a Soviet combined arms army to develop a course of action, complete a plan, prepare and issue orders, and send its first company across a line of departure can be estimated with some degree of certainty. Why? The time permitted to complete tasks associated with planning, preparing, and issuing orders, at

every level of command are governed by established norms, historically, scientifically, and mathematically substantiated. In fact, numerical standards are employed for virtually every aspect of Soviet planning and execution. In the Soviet basic textbook for officers, Fundamentals of Tactical Command And Control, the authors state categorically, "Without mathematical methods, without quantitative and qualitative substantiation, it is impossible to make a correct, especially an optimum, decision for combat. Mere common sense, experience, or intuition is no longer enough."<sup>9</sup> In other words, the Soviets believe that the use of norms and quantitative analysis permit commanders to predict the effectiveness of their operations and develop the best course of action for any battlefield situation.<sup>10</sup>

Soviet norms, in a military context, are described as operational-tactical numerical quantities used to characterize space and time factors for operational activities of a force and the areas in which they take place. Space factors include depths of operations, widths of sectors, dimensions for combat formation widths, depths, etc. Time factors include the time allotted to accomplish the mission, complete planning, issue orders, complete marches, and so forth.<sup>11</sup>

Richard Simpkin, a renowned authority on Soviet Army operations and tactics, conducted an exhaustive analysis of open source Soviet literature trying to determine the time consumed by a Soviet army between receipt of orders, requiring an unexpected reorientation and movement, and the time its lead sub-elements (company-sized units) crossed a line of departure. Based on his research, he concluded a decision from a Soviet army commander can be expected about 15-18 hours from receipt of orders. Then, with some allowance for overlap and automation, the army's operation order, complete with its logistic and command, control, and communications annexes, should be ready in an additional 15-18 hours. Six hours are normally allowed for transmission of orders to subordinate units. Hence, divisional headquarters can be fully briefed 48 hours after the army receives its order.

In Simpkin's estimate, a tank or motorized rifle division should be able to issue its order about 12 hours from receipt of orders, but allowing for detailed planning and combined arms coordination, he believes they will usually be permitted about 24 hours. He also concluded it would be unlikely that regiment and battalion commanders would need more than 12 hours each to complete their plans and issue orders. Therefore, the company commander of an advance guard battalion of a leading regiment

would be able to issue his orders about 96 hours, or about 4 days, from the time the army commander received his order, an impressive ability.<sup>12</sup> Simpkin also emphasized the fact that in World War II, a Soviet army required about 15 days to complete this same process. In his opinion, this impressive reduction in time results primarily from intelligent application of the computer and automated data processing systems to the Soviet troop control process.<sup>13</sup>

In 1984, Major Steven J. Argersinger completed what has become a celebrated study of the Soviet troop control process. His research disclosed the impact of applying automated systems, time management techniques, and operating procedures to the Soviet troop control process. In addition, his research indicated the Soviets strongly believe that the more efficiently they are able to manage time on the battlefield, the less effectively the opposing commander can use the same time.<sup>14</sup>

Recently, Major David Fastabend provided additional insights to the Soviet troop control process in his excellent monograph titled "Fighting By The Numbers: The Role Of Quantification in Tactical Decision Making." His research indicated a Soviet commander is not supported by the command and control system. Instead, he is an integral part of it and his role is primarily creative. In stark contrast to U.S. Army methods, a

Soviet commander develops the course of action for his unit, then his staff subjects the course of action to extensive quantitative analysis to insure it is scientifically substantiated.<sup>15</sup>

In the Soviet army, the feasibility of a commander's course of action is determined by comparing it to established norms for time, space, and relative combat power. Staff planning tools in this calculation effort include formulas, nomograms, calculation forms, programmable calculators and tactical computers. In addition, higher level staffs, division and above, are believed to employ extensive computer model simulation and wargaming to forecast probable outcomes of a commander's proposed course of action. This methodology has produced an impressive reduction in the amount of time consumed to plan and mount an operation.<sup>16</sup>

The Soviets also believe that to respond promptly to a change in the situation, it is essential to have the ability to reduce the time expended on receiving, processing, transmitting information. Accordingly, the Soviets have sought to complete these tasks more effectively through :

- Wide use of the means of automation and mechanization.
- Rational allocation of communication channels and their workloads.
- Use of formatted documents.
- Strict control over the passage of information.

In addition, they recognize that reducing the time required to organize combat action often depends on the speed with which orders and directives are prepared. Consequently, the Soviets have achieved increased efficiency in this task by:

- Using standard forms.
- Working out battle orders or directives on charts.
- Writing documents directly from the chart, or map, without drafts.
- Using dictaphones, duplicating machines, and computers.
- Transmitting directives directly from the chart or map via communication systems.

In particular, the use of preprinted forms has received strong emphasis. The Soviets have concluded that up to fifty percent of an operations order is permanent information. Therefore, the use of formatted documents cuts down by half or even more the time needed to transmit critical information within a unit.<sup>17</sup>

The Soviets have also implemented the use of network schedules to both reduce and more efficiently manage allotted planning times. These schedules, in the form of Program Review and Evaluation Technique (PERT) diagrams and spreadsheets, specify the time allocated to the staff to complete planning tasks issue orders. These tools permit the chief of

staff to quickly visualize the critical tasks and potential bottlenecks.<sup>18</sup> As Argersinger summarized:

The Soviets have a far keener appreciation of the meaning of time on the battlefield than the U.S. Army. As a consequence, they have honed their staff procedures to a very fine edge. The use of network schedules, the efficient management of information and their small size are all admirable characteristics of the Soviet staff. All else being equal, we would find it very difficult, if not impossible, to turn inside the Soviet decision cycle based solely on staff mechanics.<sup>19</sup>

### **Movement of a Soviet Army**

In the art and science of moving large, combined-arms units, the Soviet Army and the U.S. Army take entirely different approaches. Richard Simpkin summarized the fundamental difference succinctly :

It may help to elucidate the Soviet approach to deployment if I remark that the Anglo-Saxon moves between fights, the Russian fights between moves...For Soviet mobile forces, fighting is not an end in itself or, except in the narrowest sense, a means of imposing one's will on the enemy. It is a means to the continuation of purposeful movement.<sup>20</sup>

However, despite the emphasis Soviets place on the rapid movement of large units to achieve operational objectives, their march speeds, rates of advance, vehicle intervals, and march control measures are not much different than those used by U.S. forces. Yet, a Soviet combined-arms army can move much faster than a U.S. heavy corps. For one

thing, a Soviet army is smaller. Consequently, it has a shorter pass time given the same conditions. Moreover, besides being smaller in size, the Soviets enjoy additional advantages.

First, the Soviets are fanatical about the importance of maintaining rapid movement and retaining freedom to maneuver large forces, through the entire depth of a defending enemy; the essence of operational art. This attitude is deeply rooted in their doctrine, training, and basic mentality. Second, the Soviets possess an impressive organization of special troops, called the Commandant's Service, who deploy well in advance of combat maneuver forces. Their sole purpose is to facilitate movement control and the uninterrupted advance of forces to their immediate objectives. These units are held directly responsible for maintaining strict order on the designated routes of advance and strict adherence of units to established movement schedules. The Commandant's Service "includes the most experienced and trained officers, non-commissioned officers, and soldiers that are communists and Komsomol members capable of suppressing with a heavy hand possible disorganization and impetuous actions by individual troops."<sup>21</sup> Third, the Soviets have recurring opportunities to actually practice moving large units and maneuvering them in training, something quite extraordinary in recent U.S. experience.

For all these reasons, the Soviet capability to move large units is quite impressive. For example, Richard Simpkin estimated, a Soviet tank army is capable of completing a 150 kilometer move along a single route in 32 hours from the moment of decision, the first serial being able to move 2 hours after the army commander's decision is made.<sup>22</sup> Compare this feat to the capability of a U.S. heavy corps described earlier in the chapter (about 96 hours).

A comparison of subordinate divisions looks the same. Kindsvatter estimated a Soviet tank division has a pass time of 15 hours on a single route, occupying about 377 kilometers of road space. In contrast, a fully modernized U.S. armor or mechanized infantry division occupies about 526 kilometers of road space and has an estimated pass time of over 22 hours.<sup>23</sup>

### **Conclusions**

Given that agility is relative and means the ability to reorient, maneuver, and concentrate superior combat power faster than the enemy, a U.S. heavy corps and its major subordinate combat unit, the armor or mechanized infantry division, are not as agile as their Soviet counterparts.

Regarding the planning process, unlike the Soviets, the U.S. Army has not established methods, procedures, or standards of performance at corps at division level to govern the length of time allowed to complete the tasks associated with developing a course of action, completing a plan, preparing and issuing orders, coordinating, and synchronizing movement of its subordinate units. Moreover, it has just begun to harness automation, digital communications, and computer technology to accelerate the command and control process.

Evidently, the U.S. Army has no idea how fast a corps can respond to a change in direction. Put another way, it does not know how long it takes from the time a corps receives an order until the time its first company is poised to move. It is anybody's guess. Furthermore, the U.S. Army does not know how fast the process should be to obtain a decisive edge over Soviet commanders at each echelon of command.

Equally important, the heavy corps and division are significantly larger, and inherently possess greater inertia than Soviet forces. They take longer to energize and move a given distance under the same conditions. In fact, these premier U.S. tactical units are actually slower than their World War II counterparts, despite the introduction of the swifter M1 tank and M2 infantry fighting vehicle.<sup>24</sup> Incidentally, this came as no

surprise. The U.S. Army's new generation of equipment, such as the M1 and M1A1 tank, the M2 infantry fighting vehicle, and the Multiple Rocket Launch System, comprise no more than 15% of the 8000 vehicles in the current modernized armor division, augmented with its usual attachments from corps. Hence, in order to fight as a combined-arms unit, without sacrificing cohesion and synchronization, a U.S. division commander is compelled to move his modern equipment at the same rate as his combat support and combat service support vehicles of the previous generation.<sup>25</sup>

And finally, current U.S. Army doctrine for corps and division operations does not address movement planning techniques or movement procedures at all. Moreover, due to austere resources and budget constraints, U.S. divisions and corps seldom practice large unit movements.

Well, so what? What difference does it make if U.S. combat maneuver units are not quite as agile as their Soviet counterparts? This issue is explored in the next chapter.

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6. Crosbie E. Saint, III Corps Maneuver Booklet, Headquarters, III Corps, Ft. Hood Texas (May 1987) : 38.
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12. Richard E. Simpkin, Red Armour: An Examination of the Soviet Mobile Force Concept (1984) : 131-132.
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14. Steven J. Argersinger, An Operational Concept for the Battlefield Defeat of the Soviets Based on Understanding the Soviet Decision-Making Cycle, U.S. Army Command and General Staff College Thesis (May 1984) : 127.
15. David A. Fastabend, Fighting by the Numbers : The Role of Quantification in Tactical Decision-Making, School of Advanced Military Studies Monograph, U.S. Army Command and General Staff College (December 1987) : 19.
16. Ibid., 19.
17. Argersinger, An Operational Concept for the Battlefield Defeat of the Soviets Based on Understanding the Soviet Decision-Making Cycle : 128.
18. Ibid., 131.
19. Ibid., 138.
20. Simpkin, Red Armour : 89.
21. D.A. Ivanov, V.P. Savel'yev, and P.V. Shemanskiy, Fundamentals of Tactical Command and Control : A Soviet View : 292.
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## CHAPTER 4

### ANALYSIS

#### **The Need For Agility**

If the framers of FM 100-5 have been interpreted correctly, the need for agility stems directly from the dilemma faced by the U.S. Army in Central Europe; forces which are compelled to defend against a potential aggressor who enjoys numerical superiority and a substantial advantage in organic combat power. Given that superior combat power applied at the proper time and place is the source of tactical and operational success, the U.S. Army's challenge becomes readily apparent.

FM 100-5 emphasizes, "The defender must concentrate at the decisive time and place if he is to succeed. He will have to mass enough combat power to avoid defeat throughout the battle and, if he is to defeat the attacker, he must obtain a local advantage at points of decision. To do this, the defender must normally economize in some areas, retain a reserve, and maneuver to gain local superiority elsewhere."<sup>1</sup> However, the crux of the problem remains the fact that against the echeloned attack of a Soviet opponent, this process of concentrating friendly strength against enemy weakness must be accomplished successively over time,

across a broad front, with a finite number of forces in theater, to reach the point where the balance of combat power tips in favor of the defender, initially at the tactical level, then the operational level.

Given the anticipated tempo of a Soviet attack, and the echelonnement of large formations in depth across a broad front, the defender must have the ability to shift and concentrate a relatively large portion of its available combat power rapidly and repeatedly over large distances if it hopes to achieve the successive and sequential destruction in the fashion described by doctrine. Indeed, the validity of the defensive concept of AirLand Battle, hinges on the defender's ability to reorient his available combat power, maneuver, and concentrate faster than the enemy can do the same. Better yet, a picture is worth a thousand words.

### **An Illustration of Agility**

Taken at face value, the concept of using agility to defeat a larger opponent, is nothing more than a series of proactive counterattacks, instead of reactive counterattacks, designed to throw the enemy off balance, forcing him to react in every instance and thereby forfeit the initiative over time. Figure 4-1 illustrates this idea of using superior agility to defeat a numerically superior force.

In this depiction, a defending U.S. force is shown concentrating several available units, then maneuvering them against the attacking enemy at a place and time where a superior combat power advantage can be achieved. For the purpose of this example, this process consumes a time period called T1. Reacting to this unexpected event, the Soviet commander commits a following force to close with and destroy this U.S. force. As shown, this Soviet reaction consumes the time period, T2.

However, during the same time this Soviet force reorients and executes the maneuver, the U.S. force, by virtue of its superior agility, quickly reorients, maneuvers laterally across the battlefield, and attacks another Soviet unit. In response, the Soviet commander diverts another following force to fix or destroy this threat. This reaction consumes the time period, T3. Meanwhile, during this same period, the U.S. force again reorients, maneuvers, and strikes another Soviet unit. The cumulative effect of these successive concentrations of friendly strength against enemy weakness presents the Soviet commander with a series of powerful blows which he cannot adjust to in a timely and effective manner. As an end result, he is prevented from concentrating overwhelming combat power at the place and time of his choosing, the predominant objective of his plan.

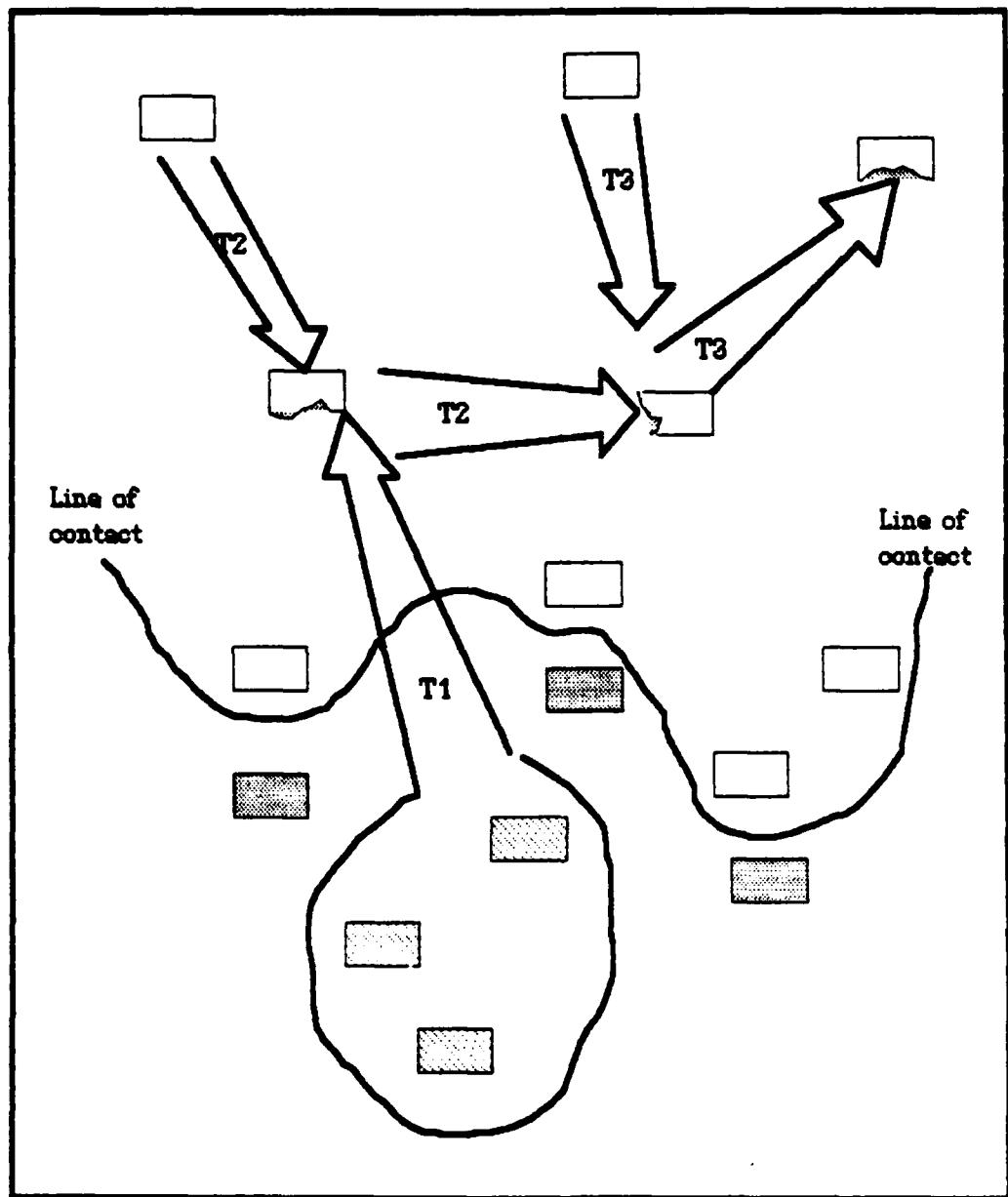


Figure 4-1. The role of agility in the defense

For this way of fighting to work, the U.S. force must obviously possess greater agility than its opponent. Moreover, the effective application of agility in this fashion depends on several essential conditions, which can be viewed as prerequisites for success.

#### **Prerequisites Necessary To Apply Agility**

To begin with, this concept of agility appears feasible, only if U.S. forces operating at the tactical level of war have a near perfect knowledge of the enemy's forces, current locations, dispositions, strengths and weaknesses, and the suitability of routes throughout its area of operations and area of interest.

Second, the successive concentration of superior combat power, as depicted in Figure 4-1, is predicated on the availability of reserves, concealed and harbored for that specific purpose. After all, defending forces in contact with lead echelons across the front will have their hands full trying to prevent, contain, or eliminate Soviet penetrations and envelopments in their sectors.

Third, in exploiting superior agility in this fashion, it is incumbent on the defender to inflict disproportionate losses on the enemy. In other words, given a limited, finite pool of available combat power in

theater, the defender simply cannot afford attrition, a gradual reduction in combat power over time. In a sense, he walks a tight rope. He cannot afford to become decisively engaged with the enemy, risking the loss of combat effectiveness or freedom of action, yet he must strike hard enough to shift the balance of relative combat power or break the enemy's will to fight.

Fourth, the units conducting this series of proactive counter-attacks within the depths of the enemy's area of operations have two options when it comes to sustainment: maneuver in a fashion which protects their lines of communication, a very difficult prospect, or abandon their lines of communication for a short period of time. Naturally, the second option requires a force to be logically self-sufficient for the period of time necessary to execute the series of maneuvers and engagements. In other words, maneuver forces used in this fashion must possess an inherent *endurance*, the ability to maintain a high level of combat effectiveness over the period of time required to complete these successive strikes.

Furthermore, if the Soviet's desired operational tempo is dependent on relentless reconnaissance, fire superiority, tactical mass and rapid assault closure, as we believe, then some portion of the defender's avail-

able combat power must be aimed at defeating those units which provide him this capability, i.e., reconnaissance units, artillery battalions and their ammunition transport, engineer bridging assets, and movement control elements. Because of where these units are located during a Soviet attack, this concept implicitly requires an extension of the close operation forward of the forward lines of troops (FLOT), something quite different from the concept of deep operations and something which apparently escaped notice in the current edition of FM 100-5.

Last, the successive maneuver and concentration of a force cannot be executed haphazardly, striking anything in its path. In the end, these combat actions must preempt or disrupt the *execution* of the Soviet's operational plan. Accordingly, targets must be carefully selected and attacked to achieve the following effects : compel him to commit second echelon forces, operational maneuver groups, and reserves differently than intended, change the main axis of attack, but most important, *force him to change his plan*. In other words, the end result must deal a devastating blow to his operational purpose, and completely disrupt his synchronization, momentum, simultaneity, and tempo of operations. This end is vital to achieve. Why?

A respected authority on Soviet Army operations, C.J. Dick, continually emphasizes the Soviet view that a victory in Europe will be a product of speed and surprise generated at the operational level of war.

The first and most important demand of the operational level commander is for speed, and elegant tactical solutions are incompatible with rapidity. Of course, such tactics may lead to heavy casualties. But the Soviets are prepared to accept this to gain the operational momentum vital to success, and they field large forces to make a heavy butcher's bill acceptable.<sup>2</sup>

The Soviets also recognize that any conflict in Europe will be characterized by great fluidity, obscure and rapidly changing situations, and unprecedented destructiveness. As C.J. Dick points out:

Success in such combat depends, the Soviets say, on getting the right answers at the operational level. If the operational commander has chosen the right axis, deployed correctly, made timely decisions and thus built up his efforts from the depth of his deployment faster than the enemy, he will win the all important battle for time and the initiative. Once the enemy is forced into a position where he merely reacts, inevitably late, he is well on the road to defeat. In such a concept of battle, there is no place for tactical niceties. The side that acts speedily and decisively will win - hence, the Soviet enthusiasm for simple battle drills (that is, at regiment and below). By hastening the committal of units--and indeed formations--the Soviets win this crucial struggle for time and thus put the enemy in a position of hopeless disadvantage.<sup>3</sup>

### **Insights From Analysis Of The Army 21 Concept**

It came as quite a surprise, but much of this subjective analysis is supported by a study recently completed by the Scenario and Wargaming

Directorate, U.S. Army TRADOC Analysis Command. Although the study addresses the feasibility of the future Army 21 defensive concept, it elucidates most of the prerequisites necessary to apply the current defensive concepts of the current AirLand Battle doctrine, particularly the requirement for superior agility, relative to the Soviets.

This sophisticated computer-driven scenario pitted defending U.S. forces against attacking Soviet forces in Central Europe, under conditions expected at the turn of the century. The conclusions of the study are outlined below:

- A potential vulnerability of the U.S. force is its reliance on near perfect knowledge of Soviet force disposition for success. Without the ability to identify the flanks and rear of a Soviet unit and determine its strength, close combat forces would not be able to strike at acceptable combat ratios [achieve a superior combat power advantage]. Additionally, they would be vulnerable to counterstrikes by undetected Soviet units.
- To be successful, U.S. forces have to be able to "break up" Soviet formations and attack the flanks and rear of individual Soviet combined arms divisions.
- When U.S. forces delay or cause Soviet forces to orient on U.S. forces rather than assigned geographic objectives, Soviet planned move-

ment is desynchronized. U.S. strikes on command and control, and logistics elements slow the movement rates of Soviet forces. If U.S. forces can maintain the initiative and freedom of movement while delaying the Soviets, then a movement advantage is created.

- The ability of a close combat force to reorient faster than Soviet units is essential to execute the operational concept. However, achieving the agility advantage necessary for concept execution requires more than a favorable movement and or decision point differential. To successfully execute a battle sequence, close combat forces had to move and direct their combat power for a strike and quickly reorient (often as much as 180 degrees) and move before Soviet forces could reorient and focus their full combat power against them. Subsequent movements and concentrations would often require another 180 degree shift to reorient for another strike.

- The ability to shift large U.S. combat units rapidly over large distances is essential for success. Because the Soviets have more organic and augmented combat power, U.S. forces have to use several close combat forces augmented with additional combat power to achieve favorable combat ratios at a specific location on the battlefield.

- Based on the Soviet's projected size and firepower advantage, U.S. forces need a movement advantage to win. Being able to make and execute decisions faster than Soviet units contributes to success, but a movement advantage appears to provide U.S. forces a bigger payoff.<sup>4</sup>

This study also revealed an interesting phenomenon depicted in Figure 4-2. This chart shows that as movement rate of friendly brigade-size units increased, the number of units required to achieve a

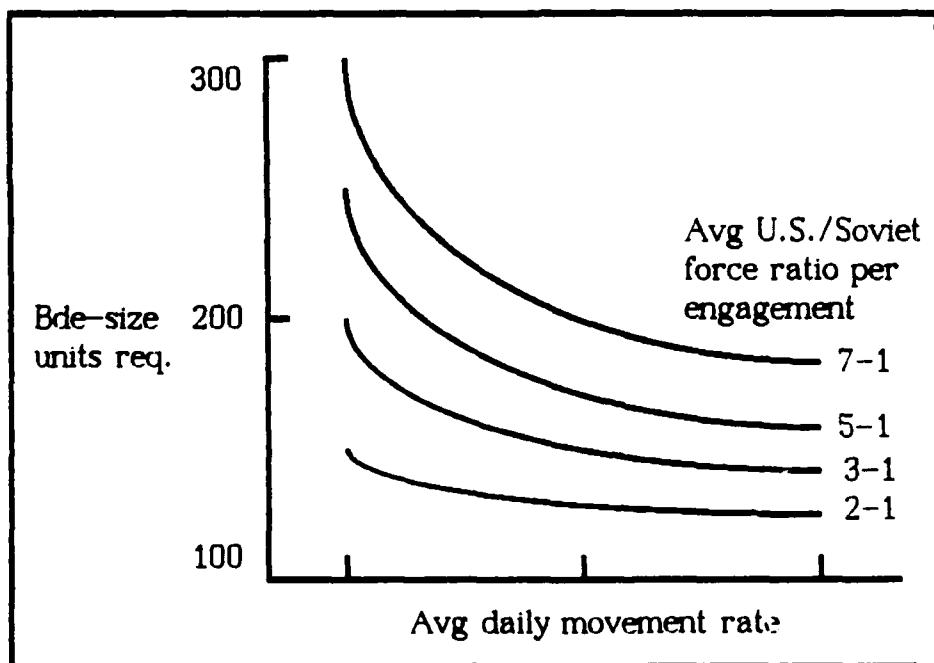


Figure 4-2. The agility pay-off

certain force ratio decreased. In other words, as agility in U.S. forces increased, a fewer number of units were required to achieve a desirable force ratio against the Soviets.

### **Conclusions**

In the final analysis, it is evident that the U.S. Army's heavy corps and the armor/mechanized infantry division, do not currently possess superior agility relative to their Soviet opponents. There is no evidence to suggest these units can reorient, maneuver, and concentrate combat power faster than their Soviet counterparts.

The length of time taken by a U.S. corps commander to complete his planning process cannot be determined from existing doctrinal or empirical evidence. On the other hand, the average length of a Soviet army commander's planning process has been estimated with confidence by several authorities. Even if a U.S. corps commander could match a Soviet army commander, hour for hour, the capability would be insufficient to apply agility as a mechanism for defeating a Soviet ground offensive. Why? A U.S. heavy corps, as currently organized, is also unable to move and concentrate for battle as rapidly as its Soviet counterpart, given the same movement conditions.

Furthermore, the ability of a commander to apply agility as a mechanism for defeating an attack implicitly depends on near perfect, real-time information about enemy strength, composition, dispositions, direction and rate of movement, plus the trafficability of routes and cross country terrain within his area of operations. Without this information, a commander courts disaster. Hence, it follows that U.S. forces must also possess a superior tactical reconnaissance and battlefield surveillance capability, relative to the Soviets.

Finally, the evidence suggests there are basically two effective ways for the U.S. Army to acquire the kind of agility envisioned by AirLand Battle doctrine; reduce the time consumed making a decision, developing a plan, preparing an order and issuing it throughout the command or increase a unit's rate of movement and speed of execution.

## ENDNOTES

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3. Ibid., 34.
4. U.S. Army TRADOC Analysis Command, Operational Working Group Report : Feasibility Phase : Army 21 Concept Study : 56-57.

## CHAPTER 5

### CONCLUSIONS AND RECOMMENDATIONS

To begin with, the evidence in this study suggested that a better definition of agility, consistent with other primary concepts underlying AirLand Battle doctrine, would be "the ability to reorient, maneuver, and concentrate superior combat power faster than the enemy." Furthermore, superior agility cannot be achieved unless it is integrated and applied in combat with other tenets of AirLand Battle doctrine. In other words, superior agility cannot be achieved in a vacuum. It must be fused with the other tenets of the doctrine: depth, synchronization, and initiative.

In addition, the evidence strongly suggested the current U.S. heavy corps and the armor and mechanized infantry division are not as agile as their Soviet counterparts, nor can they hope to be given their size and organization. In short, there appears to be a dangerous disparity between the tenet of agility in AirLand Battle doctrine and the current capability of the Army's major ground maneuver units to apply it. To make matters worse, agility has yet to become a criterion in development of U.S. Army command and control doctrine, training, force structure,

and materiel. There are several things the U.S. Army should do to eliminate these deficiencies.

First, the U.S. Army should devote a concerted effort to determine, with confidence, the length of time required by Soviet units, upon receipt of orders, to develop a course of action, complete a plan, prepare and issue orders, and send their lead companies across a line of departure. This would serve as the "mark on the wall. Once this is accomplished, the focus of the U.S. Army Training and Doctrine Command should shift to developing and teaching the individual and collective skills which would produce, over time, the capability to accomplish the same tasks much faster than the Soviets without sacrificing synchronization of combined-arms operations, a very important consideration.

Achieving this end requires the development, publication, and instruction of common operating procedures, tools, and techniques at the division and corps level, which will accelerate the planning process and the execution of maneuver across the battlefield, thereby enhancing the inherent agility of its forces. The U.S. Army's current approach excludes these essential warfighting skills and techniques from doctrinal publications. Consequently, the U.S. Army has no common means of training men how to achieve superior agility on the battlefield. There is plenty of

"tribal wisdom" extant in the field, however it has not been captured and embedded in the Army's school system. If it is not embedded in the school system, it will not manifested in leaders and units on the battlefield, plain and simple.

Equally important, the U.S. Army must also establish performance standards for tasks associated with planning and movement, and hold corps and division commanders accountable for acheiving them. In other words, formally evaluate corps and divisions on a recurring basis to see if they can meet the standards.

Furthermore, the U.S. Army should accelerate its efforts to harness the information processing and dissemination capabilities of existing computer technology and communication systems, but it should proceed cautiously. As Colonel Thomas White cautioned in his recent article, "Disrupting The Tempo Of Soviet Operations,"

...the U.S. Army must avoid overemphasizing high technology as the key to success in combat for accomplishing the entire scope of battle tasks faster than our opponent. There is an important distinction between speedy execution of critical functions in accordance with specific battlefield situations and employing speed indiscriminantly to do virtually everything quicker than our opponent.<sup>1</sup>

Hand-in-hand with this effort, the U.S. Army should earnestly strive to reduce the inertia of its corps and divisions by increasing the

mobility and speed of the entire warfighting fleet. As a first step, it would be prudent to invest in programs which bring the speed and mobility of the combat support and combat service support fleet on par with the new generation of combat vehicles. Currently, this fleet is an albatross around the neck of division and corps commanders. Indeed, it limits the potential agility of these units. As Simpkin so poignantly reminded his readers, "The physical mobility of its equipment sets an upper limit on the tempo a force can achieve." <sup>2</sup>

Next, the evidence strongly suggests that a complete restructure of the U.S. Army's ground maneuver forces is necessary if it is really serious about using superior agility as a mechanism for defeating a Warsaw Pact attack in Central Europe. The current armor/mechanized divisions are simply too large and cumbersome to achieve superior agility relative to their Soviet opponents. The inertia they possess is the primary obstacle. Indeed, the evidence indicates smaller, combined-arms units, logically independent for 3-5 days, offer the best means of achieving an agility advantage. Units whose sustained combat effectiveness depends on the continual and uninterrupted delivery of supplies to sustain combat power, are not suited to apply agility in a proactive fashion as a means to defeat a Soviet-style offensive. Admittedly, this

conclusion attacks the traditions of the U.S. Army; an approach usually foredoomed to fail. However, the U.S. Army currently possesses a model which shows promise--the armored cavalry regiment. This is the only unit in the Army's force structure organized as a powerful, combined-arms fighting unit, loaded with an impressive reconnaissance capability, and tailored to be logically self-sufficient for about 2-3 days.

And finally, the Army should mount, with a sense of urgency, a comprehensive program to develop and provide commanders the real-time reconnaissance capability, which is absolutely necessary to apply the concept of agility at the tactical level of war. Sad but true, the U.S. Army in the past decade has spent its budget dollars on the development and fielding of killing systems at the expense of reconnaissance and surveillance systems, which permit its forces to find and follow the enemy in the first place, not to mention where enemy weaknesses and suitable indirect approaches actually exist. This fact is easily substantiated.

For instance, in the last 6-8 years, brigade reconnaissance units have been eliminated from the force except in separate heavy brigades, the size of the division cavalry squadron has been reduced by half, the buy of OH-58D scout helicopters was slashed, never to see service in a

reconnaissance role, and this year the Aquila remotely piloted vehicle program has been cancelled, along with the EH-60A Quick Fix helicopter. Again, if the U.S. is serious about applying its warfighting doctrine, it better reverse this trend without delay.

The fruition of all these capabilities would inevitably have a synergistic and beneficial effect on the warfighting capabilities of the U.S. Army, enhancing not only the tempo of combat operations, but producing the superior agility necessary to overcome an enemy's advantage in relative combat power. However, to achieve the maximum effect on the battlefield, the application of agility should also be coupled simultaneously with tactics designed to degrade the Soviet troop control system.

As John Hemsley emphasized in his book, Soviet Troop Control, "It is in the [Soviet] traffic control sphere that some vulnerability may be detected. It is an area where even relatively minor dislocation will almost certainly escalate to create progressive delays leading to diminished tactical effectiveness and subsequent loss of operational tempo."<sup>3</sup> In short, U.S. forces could also achieve an agility advantage over the Soviets by the application of maneuver and firepower designed to disrupt the movement of committed forces staging or en route to their immediate objectives. As Colonel White concluded, "We must realize that combat

success lies as much with slowing or extending the time frames in which the enemy conducts critical tactical and operational maneuver as it does with increasing the speed of our own decision-making process<sup>4</sup>.

This appreciation leads to another relevant conclusion. Defending U.S. corps and divisions must focus a good portion of their available combat power against those Soviet units which are vital to sustaining their uninterrupted movement and the desired tempo of offensive operations through the terrain of Central Europe, i.e., tactical reconnaissance units, artillery groups, air defense artillery assets, and engineer bridging units. As Clausewitz would undoubtedly agree, these forces constitute the Soviet's *center of gravity* at the tactical level of war, the capability from which the force derives its freedom of action and physical strength.<sup>5</sup> Coupled with the force enhancements suggested in the previous paragraphs, this approach to fighting would surely be an effective means of shifting the relative balance of combat power and contribute to the goal of achieving superior agility. Argersinger came to a similar conclusion in his analysis of the Soviet decision cycle. He observed :

The U.S. commander will maximize his combat power by concentrating his forces on the supporting arms....For example, by separating the Soviet ground commander from his artillery and air defense weapons, not only has the U.S. commander given himself more capability by reducing a significant Soviet threat but also, and perhaps equally important, he has disrupted the

Soviet commander's plan and caused doubts as to his ability to successfully complete his mission.<sup>6</sup>

To sum up, the evidence indicates the U.S. Army must make substantial changes in doctrine, training, force structure, and materiel to achieve the superior agility necessary to apply it as a mechanism for defeating a Warsaw Pact offensive, particularly in Central Europe. Moreover, there is no evidence to indicate a quest for agility is driving the development of force design, materiel acquisition, or individual and collective training. Clearly, some serious issues and discrepancies must be resolved before the U.S. Army can claim an ability to apply this aspect of its doctrine. In addition, this study revealed that the use of agility as a mechanism for defeating a numerically superior force, is predicated not only on superior quickness and reconnaissance capability relative to the Soviets, but of rapid movement toward the vital feature of the enemy's tactical and operational formations; its center of gravity. As Colonel David Skaggs so eloquently put it, "Agility is distinguished from speed as the rolling boulder is distinguished from the karate expert. Both are quick, but the latter directs his movements toward the most vulnerable aspects of his opponent."<sup>7</sup>

To conclude, this study essentially substantiated what General William Richardson intuitively knew all along. Given the character of

conflicts and resources available the future, the application of superior agility will be essential to the U.S. Army's future tactical and operational success. However, the U.S. Army better get serious if it expects to see it manifested on the battlefield.

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2. Richard E. Simpkin, Race to the Swift (1985) : 148.
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